

### **REMARKS**

Claims 2, 4, 7 and 17 have been amended to clarify the claimed invention. Claims 19-21 have been added. Claims 2-9 and 17-21 are pending in the application, with Claims 2, 4, 7 and 17 being independent. For the reasons set forth below, Applicant believes that the rejections should be withdrawn. The Applicant kindly request allowance of the pending claims.

### **REJECTION OF CLAIMS 1-18 UNDER 35 U.S.C. 102(b)**

The Examiner rejected Claims 1-18 under 35 U.S.C. 102(b) as being anticipated by U.S. Pub. No. 2003/0137293 to Welsch et al. ("Welsch"). The Examiner alleged that Welsch describes a magnet with front and back faces where the polarities of the faces are different from each other. Welsch describes two position sensors. The sensor illustrated in Fig. 1 measures a linear path and the sensor illustrated by Fig. 2 measures a radial path. Welsch describes that one end of the magnet has one polarity and the other end of the magnet has the opposite polarity. *See e.g.* end 8 and area 9 of Fig. 1 where the direction of the arrows indicate polarity and end 16 and area 17 of Fig. 2 where the direction of the arrows indicate polarity. Although Welsch describes a magnet that has different polarities at different areas along the length of the magnet, Welsch does not describe "a magnet having a front face along a longitudinal direction of the magnet that has one polarity and a back face along the longitudinal direction of the magnet that has an opposite polarity", as recited by Claims 2, 4, 7 and 17. As illustrated in the figures of the present application, the magnet has a front face that runs the length of the magnet that has one polarity and a back face that also runs the length of the magnet that has the opposite polarity. *See e.g.* Fig. 1a, 1b, 2, 3, 4, 6, where the front face has a N-pole and the back face has a S-pole.

The magnet described by Welsch generates magnetic flux with a single-loop structure, whereas a magnet as recited in Claims 2, 4, 7 and 17 inherently generates magnetic flux with a two-loop structure. *See* Fig. 3b and the accompanying text. Since the magnet recited by Claims 2, 4, 7 and 17 generates magnetic flux with a two-loop structure, the linearity is improved, as described in Fig. 5b and the accompanying text. In contrast, the

magnet described by Welsch suffers from the poor linearity described in the specification on page 2, lines 21-24 since it only generates magnetic flux with a single loop. Thus, the claimed invention is patentable over Welsch.

Claim 3 depends from Claim 2, Claims 5 and 6 depend from Claim 4, Claims 8 and 9 depend from Claim 7, and Claim 18 depends from Claim 17. The dependent claims are patentable over Welsch for at least the same reasons as the independent claims.

### **NEW CLAIMS 19-21**

New Claims 19-21 have been added and are supported by the specification (*see e.g.*, Figs. 1 and 2, and the accompanying text). Claims 19-21 specifically define the positional relationship between the magnetically-sensitive sensor and the slider. The dependent Claims 19-21 are patentable over Welsch for at least the same reasons as the independent claims. In addition, none of the figures or corresponding sections of Welsch disclose or suggest this positional relationship. Accordingly, Applicant believes that Claims 19-21 are patentable over Welsch. No new matter has been added.

**CONCLUSION**

The foregoing is submitted as a complete response to the final Office Action identified above. This application should now be in condition for allowance, and Applicant solicits a notice to that effect. The Commissioner is authorized to charge any additional fees that may be due or credit any overpayment to Deposit Account No. 11-0855. If there are any issues that can be addressed via telephone, the Examiner is asked to contact the undersigned at 404.685.6799.

Respectfully submitted,

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